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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/361,371	07/26/1999	ALAN M. WARWICK	MSFT114130	5436

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EXAMINER

HO, THE T

ART UNIT	PAPER NUMBER
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2151

DATE MAILED: 09/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/361,371

Applicant(s)

WARWICK ET AL.

Examiner

The T. Ho

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the application filed 07/26/1999.
2. Claims 1-19 have been examined and are pending in the application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7-9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable by Hyder U.S Patent No. 6,233,624.

As to claim 1, Hyder teaches a device driver (148, Fig. 2) configured to provide information and perform actions (lines 13-40 column 6) associated with a hardware device (h/w 1, Fig. 2); and a driver library (134, Fig. 2) containing software routines (library of functions, line 67 column 5) to make the information and actions provided by the device driver (functions incorporate functionality common to most device drivers, lines 5-8 column 6) accessible to a management system, the library (134, Fig. 2) being accessible by the device driver (arrows between drivers and 134, Fig. 2) to handle messages (136 and 156, Fig. 2) issued to the device driver from the management system. Hyder does not explicitly teach a management system. However, all of the messages passing to the drivers (Fig. 2) are coming from TRANSPORT 132, wherein

TRANSPORT 132 is receives data destined for dispatch across a network via physical devices (lines 53-55 column 5). It would have been obvious to consider this as there is a management system that passes messages or data to the drivers via 132, wherein the messages or data would be processed by the abstract interface 134 or the drivers themselves.

As to claim 2, Hyder further teaches the device driver is further configured with a unique software routine particular to the device driver (perform specific required processing, such as hardware specific operations, lines 2-4 column 6) and related to the hardware device (to manage a particular hardware or physical device, lines 4-5 column 6). Hyder does not explicitly disclose a unique software routine. However, as discussed above, the device driver only needs to perform specific required processing which is obviously understood as the device driver contains unique codes to manage a particular physical device, wherein all of the common functions would be performed by the library of functions 134 as disclosed by Hyder (line 63 column 5 to line 12 column 6).

As to claim 3, Hyder further teaches the device driver is further configured to execute the unique software routine (perform an inherent process, line 22 column 7) in response to a call from the driver library (when directed by a call represented by 136 through 134, lines 24-25 column 7).

As to claim 4, Hyder further teaches the driver library is further configured to call the unique software routine (134 calls the corresponding driver, lines 25-26 column 6) and cause the unique software routine to execute (performs its inherent processing on the data packet, lines 26-27 column 6).

As to claim 5, Hyder further teaches the unique software routine is configured to retrieve data (when directed by a call represented by 136 through 134, lines 24-25 column 7) and perform actions (perform an inherent process, line 22 column 7) associated with the hardware device (to manage a particular hardware or physical device, lines 4-5 column 6).

As to claim 7, Hyder further teaches the unique software routine is configured to execute a method associated with the information (perform specific required processing, such as hardware specific operations, lines 2-4 column 6) associated with the hardware device (to manage a particular hardware or physical device, lines 4-5 column 6), the method being operative to pass additional information between the device driver and the management system or perform a certain action (lines 13-49 column 6).

As to claim 8, Hyder further teaches the driver library contains a software routine to format the additional information in a format consistent with the management system (messages are passed to 134 for decoding, lines 6-9 column 7).

As to claim 9, Hyder further teaches the driver library is a dynamically accessible (lines 13-40 column 6) software library.

As to claim 12, Hyder further teaches the driver library is a static library (a library of functions for interfacing to the kernel mode, line 67 column 5 to line 2 column 6) associated with the device driver.

4. Claims 6, 10-11 and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable by Hyder in view of Cabrera U.S Patent No. 5,978,815.

As to claim 10, Hyder as disclosed above teaches all interactions between the management system, driver library and device drivers are executed as calls (lines 65-67 column 6). However, Hyder does not explicitly teach these calls are IRPs. Cabrera teaches IRPs are used as the form of messages passing between components of kernel mode (Fig. 7). It would have been obvious to apply the teachings of Cabrera to the system of Hyder because the device driver may use IRP as a form of request and ask the driver library to execute a particular software routine related to handling the IRP.

As to claim 11, note the discussion of claim 10 above. Cabrera further teaches a result will be returned (200, Fig. 7) to the management system, or a client process (172, Fig. 7).

As to claim 13, Hyder discloses receiving a message (136, Fig. 2) from the management system (note the discussion of management system in claim 1), the message including instructions regarding data maintained by an instrumented hardware device (data destined for dispatch across a network via physical devices, lines 53-55 column 5); passing the message (arrows between 134, 140 and 144, Fig. 2) to a driver library (134, Fig. 2) containing software routines for handling the instructions of the message (functions incorporate functionality common to most device drivers, lines 5-8 column 6); and handling the message by the driver library (lines 13-40 column 6). Hyder does not disclose the message is an IRP message. Cabrera teaches IRP. Note the discussion and reason of combining Hyder and Cabrera references in claim 10 above.

As to claim 14, Hyder as modified further discloses passing the IRP to the driver library comprises determining whether the IRP is intended for a particular device driver (the call or request is made into 134 with a destination driver indicator or handle, lines 17-19 column 6).

As to claim 15, Hyder as modified further discloses if the IRP is not intended for the particular device driver (134 evaluating the handle, lines 24-25 column 6), passing the IRP to a next device driver in a driver stack (calls the corresponding driver, lines 24-27 column 6).

As to claim 16, Hyder as modified further discloses calling back to a device driver associated with the instrumented hardware device to request data from (make a calls or alternatively passes, lines 30-32 column 6) or perform an action by the device driver (144 performs its inherent process on the data, lines 36-37 column 6).

As to claim 17, Cabrera further teaches requesting that data be set (read/write data processing, 62 Fig. 3) at the instrumented hardware device (local storage 64, Fig. 3).

As to claim 18, note the discussions of claims 2-5 and 16 above.

As to claim 19, note the discussion of claim 8 above.

As to claim 6, note the discussion of claim 17 above.

Conclusion

Please refer to the references listed on the attached PTO-892, which are not relied upon in the claim rejections detailed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to The T. Ho whose telephone number is 703-306-5540. A voice mail service is also available for this number. The examiner can normally be reached on Monday – Thursday, 8:30 am – 6:00 pm, and every other Friday from 8:30 am – 5:00 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

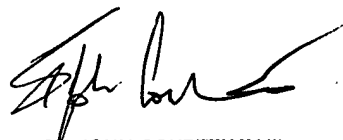
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Or fax to:

- AFTER-FINAL faxes must be signed and sent to (703) 746 – 7238
- OFFICAL faxes must be signed and sent to (703) 746 – 7239
- NON OFFICAL faxes should not be signed, please send to (703) 746 – 7240

t.h
August 23, 2002



ST. JOHN COURTENAY III
PRIMARY EXAMINER